Amendments to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

Claims:

1(Amended). A spinal fusion implant for fusing together two adjacent vertebra comprising:

a first member having first and second opposing sides and a first bore defining a central longitudinal first axis, the first bore being in communication with at least the first side;

a second member having third and fourth opposing sides and a second bore in communication with at least the third side, the second bore defining a second central longitudinal axis, the first and second axes forming a first pair; and

an elongated first pin located in the first and second bores for securing the first member to the second member at the interface formed by the facing first and third respective sides, the pin having first and second sections and at least one first outermost peripheral surface defining a first transverse dimension therebetween at the [[a]] first section defining a third central longitudinal axis, ~~and~~ the pin having at least one second outermost peripheral surface defining a second transverse

dimension therebetween at the [[a]] second section defining a fourth central longitudinal axis, the third and fourth axes forming a second pair;

one axis of at least one of the first and second pair of axes being offset relative to the other axis of the at least one pair of axes so as to place the pin in relative compression and tension in the first and second bores for providing a compressive load on the surface of the first and second bores to frictionally secure the members together.

2(Original). The implant of claim 1 wherein the first and second members and pin each comprise cortical bone, the pin and bores having approximately the same transverse dimensions.

3(Original). The implant of claim 1 wherein the first and second members are bonded to at least one of 1)to each other or 2) to at least one of the pins.

4(Original). The implant of claim 2 wherein the members and pins are each formed from a bone having a given fiber direction such that the bone resists shearing in a direction transverse to the fiber direction to a significantly greater extent than in a direction parallel to the given direction, the longitudinal axes of the pin sections all being substantially along the fiber direction.

5(Original). The implant of claim 2 wherein the member sides each define a plane and the members and pins are each formed from a bone having a given fiber direction such that the bone resists a tensile force and a shearing force in a direction transverse to the fiber direction to a significantly greater extent than in a direction parallel to the given direction, the bone members each having a fiber direction approximately parallel to the planes.

6(Original). The implant of claim 1 wherein the members each have a length and a width defining a plane and a thickness normal to the plane, the members being cortical bone, the bone of the members having fibers extending in a given direction approximately parallel to the plane.

7(Original). The implant of claim 1 wherein the first and second members define a planar interface, further including an interengaging arrangement coupled to the first and second members adjacent to said interface for precluding translation displacement of the members transverse to said first and second axes in response to said compression load on said surface of said bores .

8(Original). The implant of claim 7 wherein the interengaging arrangement

comprises a further bore in each said members in communication with each other and an interconnecting pin in each said further bore, the interconnecting pin having a longitudinal axis extending through and transverse to said interface.

9(Original). The implant of claim 7 wherein the first member has a planar interface surface at said first side, the second member having a planar interface surface at the third side for abutting said first member planar surface in a plane, the first member defining an edge, the second member having a leg extending therefrom, the leg for abutment with the edge to form said interengaging arrangement to preclude relative translation of the first and second members in at least one direction in said plane, said compression and tension creating compression forces in said members in said at least one direction.

10(Original). The implant of claim 9 wherein the second member is L-shaped with the leg forming a recess with the second member planar interface surface, the first member being located in said recess.

11(canceled).

12(Original). The implant of claim 1 wherein the axes of the first pair of axes are

offset relative to each other and the axes of the second pair of axes are coaxial.

13(Original). The implant of claim 1 wherein the axes of the first pair of axes are coaxial and the axes of the second pair of axes are offset relative to each other.

14(Original). The implant of claim 1 wherein the offset is formed by the at least one axis being parallel to and spaced from said other axis.

15-17 (canceled).

18(Original). The implant of claim 1 wherein the sections are selected from one or more of the group consisting of transverse square cross section, transverse circular cross section, transverse elliptical cross section, a polygon transverse cross section, a triangular cross section, a multiple sided elongated figure, an elongated element with one or more elongated ribs extending radially therefrom, an elongated element with one or more projections extending radially therefrom and any combination thereof.

19(Original). The implant of claim 18 wherein the pin has a longitudinal axis and is cortical bone having a fiber direction in the general direction of the longitudinal

axis.

20(Original). The implant of claim 1 wherein the first member includes a third bore and the second member includes a fourth bore in communication with the third bore, and a further pin in the third and fourth bores.

21(canceled).

22(Original). The implant of claim 20 wherein the elongated pin and the further pin are different in outer peripheral shape.

23(Original). The implant of claim 20 wherein the further pin is circular cylindrical.

24(canceled).

25(Original). The implant of claim 1 including two sets of said first and second bores and a second pin, the first pin engaged with the first set of bores and the second pin engaged with the second set of bores.

26(Original). The implant of claim 25 wherein only the first set of bores have

offset axes relative to each other and the first and second sections of each of the first and second pins have coaxial axes.

27(Original). The implant of claim 25 wherein only the first pin has offset first and second sections, the second pin and first and second bores of both sets of bores comprising coaxial through bores.

28(Original). The implant of claim 25 wherein the implant is elongated defining a longitudinal axis, the two sets of bores being spaced from each other along the longitudinal axis of the implant.

29(Original). The implant of claim 25 wherein the implant is elongated defining a longitudinal axis, the two sets of bores being spaced apart in a direction transverse to the implant longitudinal axis.

30-32 (canceled).

33 (Original). The implant of claim 1 wherein the members each comprise sheet material, the sheet material having opposing surfaces defining said sides, the members forming a wedge having proximal and distal ends, the proximal end forming an anterior end and the distal end forming a posterior end, the implant

having a longitudinal axis along the interface of said members extending through said proximal and distal ends parallel to the interface of said members.

34–59 (canceled).

60(Amended). A cortical bone implant comprising:

a first cortical bone member having a first bore;

a second cortical bone member having a second bore; and

a connecting pin having a longitudinal axis and one or more outermost peripheral surfaces, the pin being attached to each member in said bores, the pin having first and second longitudinally spaced portions each defining a transverse dimension to and between the pin one or more outer peripheral surfaces, the spaced portions defining first and second axis portions of the pin longitudinal pin axis;

~~means~~ said first and second bores forming a first pair and said first and second axis portions forming a second pair, one of said first and second bores being offset relative to the other of said first and second bores or one of said first and second portions being offset relative to the other of said first and second portions for placing the pin in both compression and tension to frictionally hold the pin to the members and the members together.

61(Original). The implant of claim 60 wherein at least one of the pin and the first and second bores is surface demineralized.

62(Amended). A cortical bone implant comprising:

a first cortical bone member;

a second cortical bone member abutting the first member, each member having a respective pin receiving bore having corresponding first and second internal transverse dimensions defining a corresponding first and second longitudinal axis; and

an elongated pin defining longitudinally spaced first and second sections each having an outermost peripheral surface defining respective third and fourth longitudinal axes and having corresponding respective first and second transverse dimensions to and between the outermost peripheral surface, the pin being in each member bore for attaching the members to each other, one of the pin and bores respective third and first longitudinal axis being offset relative to the respective fourth and second longitudinal axis ~~being arranged~~ to place the pin in both compression and tension.

63(Original). The implant of claim 62 including a pair of said pins and a pair of

mating bores in the members, at least one of the pins and mating bores being arranged to place the pin in said compression and tension.

64-138 (canceled).